

CLAIMS

What is claimed is:

- 5 1. A golf ball comprising a spherical core covered by a spherical shell cover, the ball made of a composite material including one of a plastic and a rubber compounded with a metallic flake.
2. The ball of claim 1 wherein the one of a plastic and a rubber is one of a polymer, ionomer, thermoplastic elastomer, rubber based material, or a combination thereof.
- 10 3. The ball of claim 1 wherein the core is constructed of a composite of a rubber, an organic peroxide and a cross-linking agent.
4. The ball of claim 1 wherein the flake is of a metallic alloy having high moduli, tensile strength and fracture toughness.
5. The ball of claim 1 wherein the ball is made in an injection molding process resulting in
15 the flake aligning itself with walls of a mold.
6. The ball of claim 1 wherein the flake is of a material including at least one of: titanium based alloys, aluminum alloys, nickel based alloys, and iron based alloys.
7. The ball of claim 1 wherein the flake comprises between 2.5 and 25% of the volume of the ball.
- 20 8. The ball of claim 1 wherein the flake comprises a particle size between 10 and 40 microns.
9. The ball of claim 1 wherein the flake comprises a particle size between 2 and 10 microns.
10. The ball of claim 1 wherein the flake comprises an aspect ratio of between 5 to 1 and 10
25 to 1.
11. The ball of claim 1 wherein the cover has a thickness between about 0.5 and 5 mm.
12. A method of manufacture of a golf ball comprising the steps of injection molding a spherical elastomeric golf ball core; injection molding a mechanically plastic spherical golf ball cover, over, and in intimate contact with the core; compounding a metallic flake

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into one of the: (i) core, (ii) cover and (iii) core and cover; and aligning the flake with a surface of the golf ball.